

Semester:	III rd	Branch:	CE/IT/CS
End Semester Examination (Nov 2021)			
Subject Code:	CE0320	Subject Name:	Computer Organization & Architecture
Date:	22-11-2021	Time:	9:30 AM to 11:00 AM
Day:	Monday	Total Marks:	40

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

Q.1	Differentiate RISC and CISC characteristics.	04
Q.2	Draw the model block diagram of 8085 processors. Explain the different flags supported by the 8085.	06
	OR	
	List memory reference instruction for basic computer and explain LDA and STA instructions.	06
Q.3	Explain various Addressing Modes for 8085 with example.	04
Q.4	Draw timing diagram for micro-operation IN C0H. Opcode for (IN) = DBH	06
	OR	
	Explain 0 Address, 1 Address, 2 Address, 3 Address instructions with given equation $X = (A * B) - [(C+D) ** 3 - (A/D)]$.	06
Q.5	Describe the significance of parallel processing with example	04
Q.6	Explain four-segment instruction pipeline with diagram.	06
	OR	
	A system uses 3 page frames for storing process pages in main memory. It uses the First in First out (FIFO) page replacement policy. Assume that all the page frames are initially empty. What is the total number of page faults that will occur while processing the page reference string given below? Total number of references = 4, 7, 6, 1, 7, 6, 1, 2, 7, 2 = 10 Also calculate the hit ratio and miss ratio.	06
Q.7	Discuss following page replacement algorithm. 1. LRU 2. FIFO 3. LFU	04
Q.8	Explain Main Memory and Auxiliary Memory with example.	06
	OR	
	1. Explain Amdahl's law. 2. Explain the Flynn's Classification of Computer Architecture	06